

Aedes wainwrighti Baisas, a Synonym of Aedes (Stegomyia)
meronephada (Dyar and Shannon), with Notes on the
Subgenus Stegomyia Theobald (Diptera: Culicidae)¹

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ABSTRACT

Aedes wainwrighti Baisas is designated as a synonym of Aedes meronephada (Dyar and Shannon). A list of characters which separates adults of the subgenus Stegomyia Theobald from the other subgenera of Aedes Meigen is given.

DISCUSSION OF THE SYNONYM

Upon examining the lectotype female and 12 female paratypes of Aedes (Stegomyia) meronephada (Dyar and Shannon, 1925), I found that this species fits the description of Aedes (Aedimorphus) wainwrighti (Baisas, 1946) which was doubtfully retained by me (Reinert, 1973) in the subgenus Aedimorphus Theobald. Aedes wainwrighti was known only from the original description of the holotype female which was reported by Stone (1970) to be nonexistent. Now that I have had the opportunity to examine the types of meronephada there is no doubt that wainwrighti is synonymous with it. Unfortunately the final manuscript of the Aedes (Aedimorphus) of Southeast Asia (Reinert, 1973) had been typed and sent to the publisher so this synonym could not be incorporated into it. The aforementioned paper, however, did list the major differences of wainwrighti from Aedimorphus and reported these were more suggestive of Stegomyia than of Aedimorphus.

Aedes meronephada has been considered as belonging to group B in the subgenus Stegomyia (Edwards, 1932; Knight and Hull, 1952; Mattingly, 1965). Mattingly (1965) illustrated and described the male genitalia for the first time and stated they were reminiscent of members of the subgenus Aedimorphus in the development of the gonostylus (alboscuteclatus group) and basal mesal lobe (vexans group). The gonostylus of meronephada is distally expanded and superficially resembles many species of Aedimorphus but on closer examination it is found to be differently developed in shape (presence of sharp angled margins of the expanded portion while these are smoothly rounded in Aedimorphus) and development and position of the gonostylar claw. The basal mesal lobe of this species is developed similarly to those Stegomyia species in the albolineatus group (group as outlined by Knight and Rozeboom, 1946) and only superficially

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resembles that of one member of the vexans group (i.e., syntheticus Barraud). Aedes meronephada, as well as the adults of the other species of Stegomyia, differ sharply from the subgenus Aedimorphus which possesses numerous acrostichal setae, small scales and short fine hairs mesally on antennal pedicel, head with erect forked scales on vertex as well as on occiput, wing with remigial setae, propleuron with 9-38 (usually 12 or more) setae and mesepisternum with 2-6 upper setae (setae in a more or less horizontal line on upper area, immediately dorsal to scale patch and ventral to the prealar area).

Aedes meronephada shares a number of features of the adult ornamentation, male and female genitalia, immature habitats (small plant-containers) and geographical distribution with the albolineatus group. The above species share with the other Stegomyia all the features listed below for the adults of the subgenus except the female maxillary palpi which are completely dark scaled, the male maxillary palpi in several of the species which are very slender and noticeably shorter than the proboscis (palpi 0.48 to 0.75 length of proboscis) and the apical portion of the male maxillary palpi which is not upturned. These three characters, however, are in the additional features group of the list and may be of species group or subgroup importance. Immatures of this group of species also appear to have similar setal arrangements and morphological developments but with diagnostic specific differences. The species of the albolineatus group of Knight and Rozeboom (1946) have a very similarly developed gonostylus to the African species of the subgenus Diceromyia Theobald but differ in other features of the genitalia and adult habitus.

The holotype female of Aedes wainwrighti was collected at Llavac, Infanta, Tayabas, Quezon Province, Luzon Island, Philippines and the lectotype female and 15 paratype females of Aedes meronephada were collected at Los Baños, Laguna Province, Luzon Island, Philippines. These two type localities are geographically located near each other (approximately 50 miles apart). In addition to the types of meronephada, material from the following Philippine localities was examined by me: Luzon Island, Sorsogon, Gubat (1♀ and 1♀ and 2 ♂♂ with associated larval and pupal skins), Camarines Sur, Mt. Isarog (14 ♀♀); Leyte Island, Dagami, Mt. Lobi (1♀), Mahaplag (1♂); Negros Island, Oriental, Cuernos de Negros Mt. (1 ♀); Samar Island, Osmena (1♂ and 1 whole larva). Knight and Hull (1952) also record this species from Tacloban, Leyte Island. Aedes meronephada, which has been collected at elevations of 800 to 2,000 feet, and the albolineatus group of species are apparently restricted to the Philippine Islands except albolineatus (Theobald) which also occupies a wide range outside the Philippines and boharti Knight & Rozeboom and pseudalbolineatus Brug from Indonesia.

NOTES ON THE SUBGENUS STEGOMYIA

Nomenclature used in this paper follows Knight (1970) and Knight and Laffoon (1970a, 1970b, 1971). During the past 6 years I have had the opportunity to examine specimens of all the presently known subgenera of Aedes with the ultimate goal of publishing clearly delineated definitions of the subgenera (especially those occurring in the Oriental Region) and to formulate a workable dichotomous key which could be

used to separate them. As a partial result of some of these studies a list of characters is given below which, when used in combination with each other, separates the adults of the subgenus Stegomyia from the other subgenera of Aedes. Each of the following characters is possessed by Stegomyia: (1) antennal pedicel with a large patch of broad, overlapping, white or silvery scales on mesal and ventral areas and which usually extends onto lower portion of lateral surface, short fine hairs absent, (2) head with erect forked scales restricted to occiput (some African species also with a few similarly developed scales located immediately posterior to ocular setae except these are decumbent and not erect), (3) acrostichal setae absent, (4) wing without remigial setae, (5) prosternum with broad white or silvery scales, at least on dorsolateral areas, (6) mesepimeron without lower setae, and (7) tarsus III always with a large white dorsobasal patch or band of white scales on tarsomeres 1 and 2. The adults of a few species of the New World subgenus Howardina Theobald (e.g., pseudodominicii Komp, whitmorei Dunn) cannot be separated from the Stegomyia by the above list of 7 characters but the males are easily distinguished by feature number 1 of the following list. Males of Howardina have a simple tube-like aedeagus and cercal setae present on the paraproct. The female genitalia of Howardina have a lip-like insula with 2-8 well developed setae while this structure is tongue-like and without setae in Stegomyia; however, it is not likely these species would be confused with the subgenus Stegomyia since the distinctively marked aegypti (Linnaeus) is the only member of the latter subgenus in the New World. Additional features which can be used with the above list to distinguish species of Stegomyia are: (1) male genitalia with aedeagus composed of 2 lateral plates each with several teeth and proctiger without cercal setae, (2) female maxillary palpi with a large dorsoapical spot or apical band of snowy-white scales (albolineatus group with dark maxillary palpi), (3) head always with broad decumbent scales on vertex; however, a few species also have a small anteromedian group of narrow ones, (4) mesepisternum with 0-2 setae on upper area and 1-5 along posterior margin (angustus Edwards has 7-8 setae along posterior margin), and (5) propleuron with 5-7 setae. The male maxillary palpi of most species are long, slender, apically upturned and with only a few short setae ventrally or lateroventrally; however, this type of maxillary palpus is also found in members of other subgenera and a differently developed maxillary palpus is found in some members of the albolineatus group (see above). Aedes vittatus (Bigot) currently considered as a Stegomyia does not belong to this subgenus and will be dealt with later.

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